## DETAILED ACTION

1. Claims 1-8 are examined on the merits.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 8 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. The claimed computer program lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material per se.

5. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

6. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See Diehr, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an

algorithm in Benson were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The limitation of "distrust selection option" is recited claim 3, line 2, and "trust selection option" in claim 4, line 2, cause said claim to be vague and indefinite because it is not clear as to what criteria being utilized to determine a "distrust selection option" or "trust selection option." Therefore, the metes and bound of the claims is not clear.

10. The subject matter encompassed by the claims must be reasonably understood without resort to speculation. Presently, speculation and conjecture must be utilized by us and by the artisan inasmuch as the claims on appeal do not adequately reflect what the disclosed invention is. Note In re Steele, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); Note also In re Wilson, 424 F.2d 1382, 1385 (CCPA 1970).

**CLAIM REJECTIONS - 35 USC § 102**

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 2, and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Biswal et al. (Biswal hereafter, US 6,477,399 B2).

13. The citation of Jesmanowicz et al. ('322 hereafter) has been cited as incorporated by reference by Biswal (column 2, lines 26-38, e.g. For a more detailed description of the preferred correlation method, reference is made to the above-cited U.S. Pat. No. 5,603,322 which is incorporated herein by reference. The correlation magnitudes that result are scaled to a range of 0 to 1.0. These correlation values may be used to modulate the brightness or color of pixels as described above to indicate brain activity. The present invention is an improvement in which the confidence level is calculated for the correlation values before they are used to indicate brain activity).

14. In regard to claim 1, Biswal discloses a method of computer-aided extraction of quantitative information, the method comprising the steps of:

15. acquiring primary data from an object to be examined (column 2, line 28, e.g. acquiring an fMRI data set);

16. processing the primary data on the basis of a primary parameter set to determine a primary result (column 2, lines 30-35, e.g. fMRI parameter);

17. determining a confidence interval with respect to the primary result (column 2, lines 30-35, e.g. confidence level);

18. displaying the primary result and the confidence interval (column 4, lines 62-67, e.g. confidence level numbers may simply be displayed along with an indication of their associated fMRI image voxels);

19. adjusting the primary parameter set on the basis of an input (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color);

20. reprocessing the primary data on the basis of the adjusted primary parameter set to determine a secondary result; and displaying the secondary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

21. In regard to claim 2, Biswal discloses the primary parameter set comprises a plurality of parameters (column 2, lines 30-35, e.g. fMRI parameter);

22. varying at least one parameter of the primary parameter set (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color);

23. adjusting the primary parameter set on the basis of the at least one parameter which is varied (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color); and

24. interactively reprocessing the primary data on the basis of the adjusted parameter set to determine the secondary result and displaying the secondary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each

of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

25. In regard to claim 5, Biswal discloses 5, comparing the primary diagnostic data to secondary data; deciding whether the primary data is comparable to any of the secondary data; reprocessing the primary data on the basis of a secondary parameter set belonging to similar secondary data to determine a tertiary result; and displaying the tertiary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

26. In regard to claim 6, Biswal discloses, the method allows for an explorative determination of a dependability of at least one of the primary and secondary results (column 2, lines 30-35, e.g. confidence level).

27. In regard to claims 7 and 8, Biswal discloses a data processing device and program (column 5, lines 35-44, e.g. Tesla MRI system) for implementing the above cited method.

**CONCLUSION**

28. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

29. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571) 272-3642.

/Cheyne D Ly/
Primary Examiner, Art Unit 2168